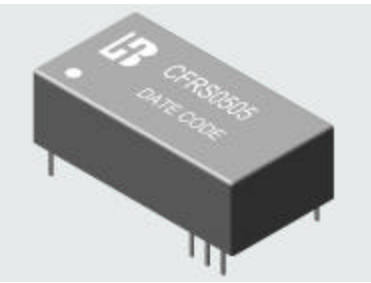


1. Features :

■ 24 Pin DIL Package	
■ Low Ripple and Noise	
■ Input / Output Isolation 500 Vdc	
■ 100 % Burn-In	
■ Input Filter with Internal Capacitor	
■ Custom Design Available	

2. Absolute maximum ratings(Exceeding these values may damage the module. [These are not continuous operating ratings](#))

Parameter	Condition	Min.	Typ.	Max.	Unit
Input Absolute Voltage Range	5V Input Model	-0.7	5	7.5	Vdc
	12V Input Model	-0.7	12	15	
Max. Output power		---	---	5	W
Output Short circuit duration		---	---	1.0	Second
Operating temperature	Output Full Load	-40	---	+85	Deg
Storage temperature		-45	---	+125	

3. Nominal Input / Output Electrical Specifications :

(Specifications typical at Ta = +25°C, nominal input voltage, rated output current unless otherwise noted)

Parameter	Condition	Min.	Typ.	Max.	Unit
Input Voltage Range	5V Input Model	4.5	5	5.5	Vdc
	12V Input Model	10.8	12	13.2	
Output Voltage Accuracy	Nominal Input	---	---	± 5.0	%
Voltage Balance (Dual Outputs)		---	---	± 1.0	
Switching Frequency		---	25	---	KHz
Temperature Coefficient		---	± 0.01	± 0.02	% / °
Isolation Voltage	60 Seconds	500	---	---	Vdc
Isolation Resistance	500 Vdc	1000	---	---	M?
Isolation Capacitance	1 KHz / 250 mV rms	---	60	---	pF
Max. Line Regulation (Per 1.0 % change in input change)		---	---	1.3	%
Hi-Enable Signal Logic level	Output Voltage Hi	3.0	5	5.5	Vdc

4. Single Output Selection Guide

4.1. Non-Regulated – 500 Vdc Isolation – Single Output

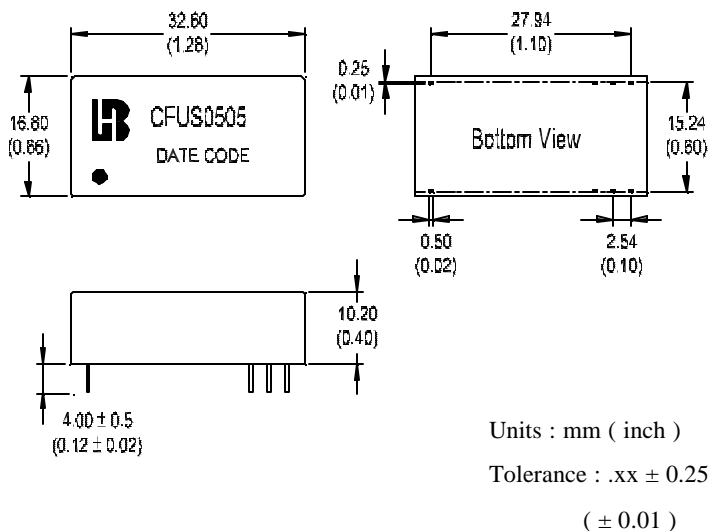
(Specifications typical at Ta = +25 °C, Nominal input voltage, Rated output current unless otherwise noted)

Bothhand Model No.	Input Voltage (Vdc)	Output Voltage (Vdc)	Output Current (mA) Max	Input Current @ No Load (mA) Typ.	Input Current @ Max. Load (mA) Typ.	Output Ripple (mV) Max.	Load Regulation (%) Max.	Efficiency (%) Typ.
CFUS0505	5	5.0	360	55	560	75	± 8	65
CFUS0509		9.0	200	55	560	75	± 8	65
CFUS0509-C		9.0	200	80	500	75	± 8	72
CFUS0512		12.0	150	40	560	75	± 8	65
CFUS0515		15.0	120	70	560	75	± 8	65
CFUS1205	12	5.0	360	25	220	75	± 8	68
CFUS1209		9.0	200	25	220	75	± 8	68
CFUS1212		12.0	150	50	220	75	± 8	75
CFUSxxxx								

Notes

1. CFUSxxxx is for Customer Design.
2. “ - C ” is Short circuit protections.
3. Load regulation is for output current change from 20 % to 100 % Max. Load.

Mechanical Dimension



Pin	500Vdc - Single		Pin
1	+Vin	+Vin	24
2			23
3			22
4			21
5			20
6	---	---	19
7			18
8			17
9			16
10	Vo(-)	Vo(-)	15
11	Vo(+)	Vo(+)	14
12	-Vin	-Vin	13

Note " --- " means Omitted

4.2. Hi- Enable - 500Vdc Isolation – Single Output

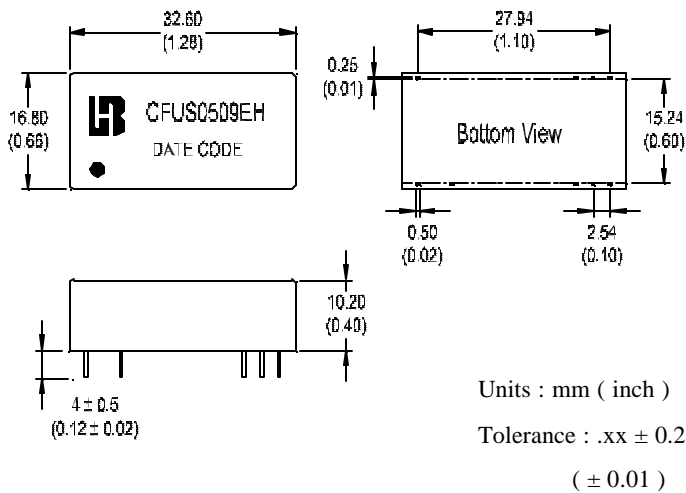
(Specifications typical at Ta = +25 °C, Nominal input voltage, Rated output current unless otherwise noted)

Bothhand Model No.	Input Voltage (Vdc)	Output Voltage (Vdc)	Output Current (mA) Max	Input Current @ No Load (mA) Typ.	Input Current @ Max. Load (mA) Typ.	Output Ripple (mV) Max.	Load Regulation (%) Max.	Efficiency (%) Typ.
CFUS0509EH	5	9.0	200	80	480	75	± 8	75
CFUSxxxxEH								

Notes

1. CFUSxxxxEH is for Customer Design
2. Enable signal : Logic Hi- Active
3. Load regulation is for output current change from 20 % to 100 % Max. Load.

Mechanical Dimension



Pin	500Vdc - Single		Pin
1	+Vin	+Vin	24
2		---	23
3		Hi-enable	22
4			21
5			20
6	---		19
7		---	18
8			17
9			16
10	Vo(-)	Vo(-)	15
11	Vo(+)	Vo(+)	14
12	-Vin	-Vin	13

Note " --- " means Omitted

4.3. Regulated – 500Vdc Isolation – Single Output

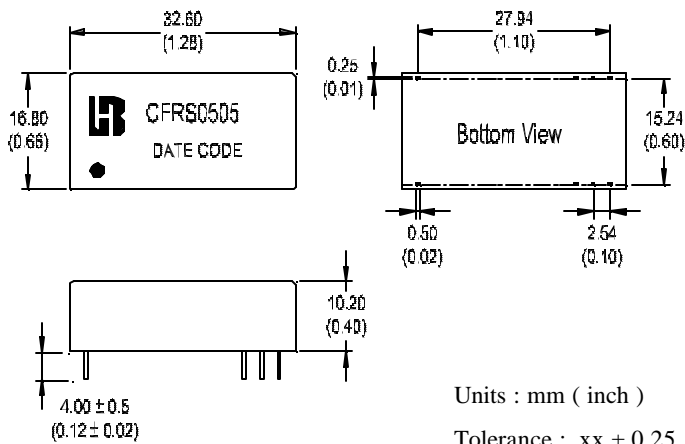
(Specifications typical at Ta = +25 °C, Nominal input voltage, Rated output current unless otherwise noted)

Bothhand Model No.	Input Voltage (Vdc)	Output Voltage (Vdc)	Output Current (mA) Max	Input Current @ No Load (mA) Typ.	Input Current @ Max. Load (mA) Typ.	Output Ripple (mV) Max.	Load Regulation (%) Max.	Efficiency (%) Typ.
CFRS0505	5	5.0	360	55	560	50	±0.5	65
CFRS0509		9.0	200	55	560	50	±0.5	65
CFRS0512		12.0	150	40	560	50	±0.5	65
CFRS0515		15.0	50	70	560	50	±0.5	65
CFRS1205	12	5.0	360	25	220	50	±0.5	68
CFRS1212		12.0	150	50	220	50	±0.5	75
CFRSxxxx								

Notes

1. CFRSxxxx is for Customer Design.
2. Load regulation is for output current change from 0 % to 100 % Max. Load.

Mechanical Dimension



Units : mm (inch)
Tolerance : .xx ± 0.25
(± 0.01)

Pin	500Vdc - Single		Pin
1	+Vin	+Vin	24
2			23
3			22
4			21
5			20
6	---	---	19
7			18
8			17
9			16
10	Vo(-)	Vo(-)	15
11	Vo(+)	Vo(+)	14
12	-Vin	-Vin	13

Note " --- " means Omitted

5. Dual Output Selection Guide

5.1. Non-Regulated - 500Vdc Isolation – Dual Output

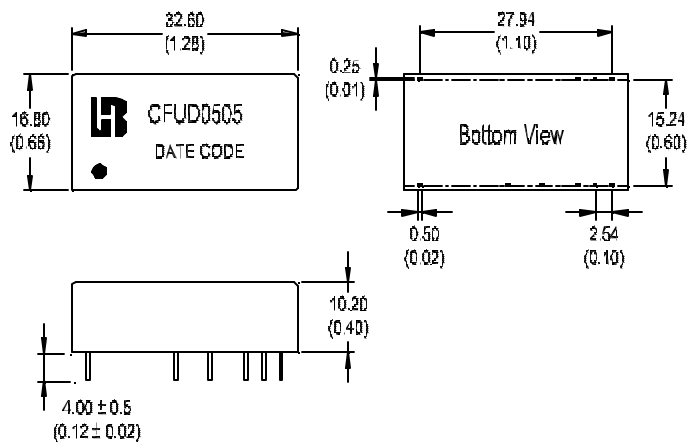
(Specifications typical at Ta = +25 °C, Nominal input voltage, Rated output current unless otherwise noted)

Bothhand Model No.	Input Voltage (Vdc)	Output Voltage (Vdc)	Output Current (mA) Max	Input Current @ No Load (mA) Typ.	Input Current @ Max. Load (mA) Typ.	Output Ripple (mV) Max.	Load Regulation (%) Max.	Efficiency (%) Typ.
CFUD0505	5	± 5.0	± 182	50	560	75	± 8	65
CFUD0512		± 12.0	± 75	60	560	75	± 8	65
CFUD0515		± 15.0	± 60	55	560	75	± 8	65
CFUD1212	12	± 12.0	± 75	25	240	75	± 8	63
CFUD1215		± 15.0	± 60	25	240	75	± 8	63
CFUDxxxx								

Notes

1. CFUDxxxx is for Customer Design.
2. Load regulation is for output current change from 0 % to 100 % Max. Load.

Mechanical Dimension



Units : mm (inch)
Tolerance : .xx ± 0.25
(± 0.01)

Pin	500Vdc - Dual		Pin
1	+Vin	+Vin	24
2	---	---	23
3			22
4			21
5			20
6			Vo2 (-)
7	---	18	
8	Vo2 (+)	17	
9	---	16	
10	Vo1 (-)	Vo1 (-)	15
11	Vo1 (+)	Vo1 (+)	14
12	-Vin	-Vin	13

Note " --- " means Omitted

5.2. Non-Regulated – 500Vdc Isolation – 5 W Dual Separate Output

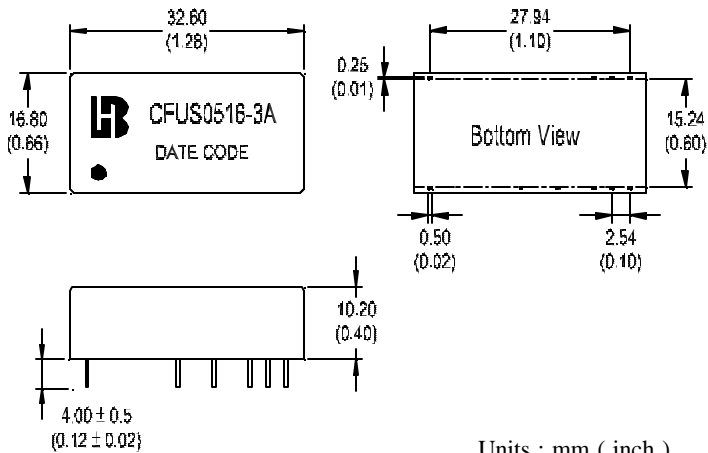
(Specifications typical at Ta = +25 °C, Nominal input voltage, Rated output current unless otherwise noted)

Bothhand Model No.	Input Voltage (Vdc)	Output Voltage (Vdc)		Output Current (mA) Max		Input Current @ No Load (mA) Typ.	Input Current @ Max. Load (mA) Typ.	Output Ripple (mV) Max.	Load Regulation (%) Max.	Efficiency (%) Typ.
		18	7.85	31	520					
CFUS0516-3A	5	18	7.85	31	520	60	370	75	± 8	70
CFUSxxxx-3A										

Notes

1. CFUSxxxx-3A is for Customer Design.
2. Load regulation is for output current change from 20 % to 100 % Max. Load.

Mechanical Dimension



Units : mm (inch)

Tolerance : .xx ± 0.25

(± 0.01)

Pin	500Vdc - Dual Separate		Pin
1	+Vin	+Vin	24
2			23
3			22
4			21
5			20
6		Vo2 (-)	19
7			18
8		Vo2 (+)	17
9			16
10	Vo1 (-)	Vo1 (-)	15
11	Vo1 (+)	Vo1 (+)	14
12	-Vin	-Vin	13

Note " --- " means Omitted